

August 17, 2010

Denis Zielinski United States Environmental Protection Agency Region III 1650 Arch Street Mail Code 3LC20 Philadelphia, PA 19103-2029

SUBJECT: FINAL RCRA CORRECTIVE ACTION SITE VISIT REPORT USACE CONTRACT NO. W912DQ-08-D-0019 TASK ORDER NO. 005A

Please find enclosed one paper copy and one electronic copy on CD Rom of the Final RCRA Site Visit Report for the following facility:

Maryland Environmental Services Hawkins Point Controlled Hazardous Substance Landfill EPA ID No. MDD 000 731 356 5501 Quarantine Road Baltimore, MD 21226

Please contact me at (215) 702-4003 with any questions or concerns.

Sincerely,

Roxanne Clarke

TtEC Project Manager

Rojanne Clarke

Enclosures

cc: Mr. Ed Hammerberg (MDE)

Mr. David Ferguson (MES Hawkins)



United States Environmental Protection Agency, Region III Corrective Action Program

FINAL RCRA SITE VISIT REPORT

Maryland Environmental Services Hawkins Point Controlled Hazardous Substance Landfill EPA ID No. MDD 000 731 356 5501 Quarantine Road Baltimore, MD 21226

Prepared for:



United States Environmental Protection Agency Region III 1650 Arch Street Philadelphia, PA 19103-4431

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RCRA SITE VISIT REPORT

MES Hawkins Point Controlled Hazardous Substance Landfill EPA ID # MDD 000 731 356 5501 Quarantine Road Baltimore, MD 21226

1.0 PURPOSE

The purpose of this RCRA Site Visit Report is to consolidate relevant information for the Maryland Environmental Services (MES) Hawkins Point Controlled Hazardous Substance (CHS) Landfill site associated with United States Environmental Protection Agency (USEPA) ID Number MDD 000 731 356. This information will be used to augment the existing facility information.

2.0 DOCUMENTATION REVIEW

Mr. Jonathan Dziekan and Mr. Brad Baillargeon of Tetra Tech EC, Inc. (TtEC) reviewed documents at the Maryland Department of the Environment (MDE) Office in Baltimore, Maryland on February 22, 23, and 24, and March 16, 17 and 18, 2010. A similar file review was conducted by Mr. Dziekan and Mr. Baillargeon at the USEPA Region III, Philadelphia Office on January 27 and 28, 2010. The purpose of these reviews was to identify known Areas of Concern (AOCs) and Solid Waste Management Units (SWMUs) at the MES facility prior to conducting a site visit.

3.0 SITE VISIT

An on site meeting and a site visit were conducted on April 1, 2010 to discuss the MES facility located at 5501 Quarantine Road, Baltimore, Maryland. A list of attendees at that site visit is as follows:

Name	Company/	Telephone	E-mail Address
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4.0 MEETING SUMMARY

The meeting began at 9:00AM EST on April 1, 2010 at the MES facility located on-site at the Hawkins Point Landfill. Mr. Denis Zielinski, USEPA Region III RCRA Project Manager, opened the meeting by reviewing the purpose and anticipated outcomes of the visit and the Resource Conservation and Recovery Act (RCRA) Corrective Action Program. Mr. Zielinski presented information regarding USEPA Region III's Corrective Action process, the Environmental Indicator Assessment Program, 20/20 Vision, the Facility Lead Program, and the policy driving these programs.

Under this investigation, USEPA Region III is focusing on two interim Environmental Indicators to evaluate whether any unacceptable risk to human health and the environment is ongoing at the facility. The two indicators are determining if human exposures are controlled and if groundwater releases are controlled.

The Facility Lead Program, as described by Mr. Zielinski, allows facilities under RCRA Corrective Action to proactively implement measures that resolve Corrective Action Items without a Corrective Action Order or Permit. The Facility Lead Program eliminates administrative burdens and expedites the resolution of Corrective Action Items.

Mr. David Ferguson of MES provided a brief description of facility activities and corrective actions, and then led a tour of the facility during which he answered questions regarding specific facility features. Photographs of the AOCs and SWMUs identified at the facility during the site visit were taken by TtEC and are included as Appendix A of this report.

5.0 LOCATION, SUMMARY OF OPERATIONAL AND MANAGEMENT HISTORY, AND DESCRIPTION OF WASTES GENERATED AT THE FACILITY

The Hawkins Point Controlled Hazardous Substance (CHS) Landfill is located within the Curtis Bay Industrial Area adjacent to Thomas Cove, near the southern Baltimore City limits, at the Francis Scott Key Bridge. The landfill's address is 5501 Quarantine Road, Baltimore, Maryland 21226. Figure 1 found in Appendix B of this RCRA Site Visit Report provides the Facility Location Map. Figure 2 found in Appendix B provides the Site Layout Map.

The Hawkins Point Landfill is owned by the Maryland Port Administration (MPA), has a total area of 67 acres, and is permitted by the MDE and the EPA. MES is the landfill permittee. The MPA obtained the 67-acre site in 1958 and developed it as a landfill for chrome-ore processing residue (COPR) from the former AlliedSignal, Inc. Baltimore Works Plant.

In 1979, MES began operating the Hawkins Point Landfill for the MPA. MES ceased disposal of COPR in Area 2 and 3 and began the construction of a new disposal cells in Area 5. COPR was deposited between 1980 and 1986 in the lower cells of Area 5, and construction debris from the Baltimore Works Plant was placed in the upper cells of Area 5 from 1990 and 1993. In 1994, construction of the final cover for Area 5 was completed. Post-Closure permit A-264 was issued by MDE on October 15, 1995 to MES and the permit remains in effect.

The Hawkins Point property is divided into six areas; Areas 1, 2, 3, 4, 5, and 6. These areas are described in detail in Section 6.0.

In January 2004, MES requested that the NPDES Permit for Hawkins Point Landfill be discontinued because on-site leachate treatment had been discontinued. The MDE granted that request. Since that time, collected leachate has been stored in an aboveground storage tank and then transported to an off-site permitted disposal facility by a licensed waste hauler.

The NPDES permit was replaced by a general discharge permit in 2004.

The facility operates under Controlled Hazardous Substance (CHS) Permit A-264.

The facility operates under EPA Final RCRA Permit Number MDD 000 731 356.

The surrounding land use is primarily zoned for heavy industrial use. Some limited undeveloped parkland does exist as indicated. There are no residences within 1,000 feet of the facility boundary.

An April 2009 Operations and Maintenance (O&M) inspection indicated the facility is being operated and maintained in an acceptable manner which included groundwater sampling and other such activities.

5.1 Area Geology and Hydrogeology

Geology

Numerous soil borings have been drilled at the site. The April 2009 RCRA O&M Inspection of the facility indicates the surface materials at the site are part of the clay facies of the Potomac Group Patapsco Formation which was deposited during the Cretaceous Period. The clay facies contains varying amounts of interbedded fine sand and silt within the hard clay. The thickness of the clay varies on-site from trace amounts at the north end to 100 feet at the south end. The average uninterrupted thickness of clay is interpreted to be 10 to 20 foot. Below the clay is a sand facies which consists of well-sorted, fine to medium grained quartz sand with local areas of abundant quartz gravel. The sand and gravel strata constitute the uppermost aquifer. The thickness of the sand and gravel strata is estimated to be 100 feet at the site.

Hydrogeology

A perched water table exists at the northern portion of Area 6 and Areas 2 and 3. Unconfined and confined groundwater conditions exist elsewhere at the site in the post-Cretaceous and Cretaceous sediments. Shallow groundwater flows from the southwest along the B&O Railroad tracks to the northeast along Thomas Cove and the Patapsco River. Groundwater elevations range from approximately 1 to 36 feet below ground surface. Local groundwater contours tend to converge near Thomas Creek. The interpreted local flow is toward the northeast-southeast, trending through post-Cretaceous sediments.

5.2 Wastes Generated at the Facility

The only wastes generated at the facility are related to typical landfill operating activities, which include leachate and waste generated during sampling activities.

6.0 DESCRIPTION OF AOCs AND SWMUs

Solid Waste Management Units (SWMUs) and Areas of Concern (AOCs)

6.1 SWMU No. 1 - Area 1

Area 1 is located outside of the fenced area of the Hawkins Point facility. There are no known wastes in Area 1. This area is the MPA's property, but is leased to EASTALCO Aluminum Company.

No evidence of a spill or release was found during the site visit or in the files reviewed at the MDE or USEPA Region III offices. Site representatives are unaware of any spills or releases from this unit and had no information regarding any spills or releases in their files.

6.2 SWMU No. 2 and 3 - Area 2 and Area 3

From 1975 to 1979, COPR materials were disposed of in three clay-lined cells located in Areas 2 and 3. Areas 2 and 3 contain COPR cells constructed by MPA which are managed by MES. Leachate generated from Areas 2 and 3 is managed by a leachate collection system constructed in the late 1970s and rehabilitated in 2002. The collected leachate is conveyed to an in-ground wet well and an above-ground storage tank respectively before being transported off-site by tanker truck for disposal at a permitted facility.

MES performs environmental compliance groundwater monitoring using perimeter wells installed in Areas 2 and 3, and manages overland surface water flow with a surface water collection swale. This non-impacted surface water is discharged to Thomas Cove.

During January 1983, Cell 40 located within the Area 3 disposal cell, received COPR. The cell was operated by MES for a short period of time and due to economic reasons was then closed. COPR materials placed within Cell 40 were removed and transported to Fondessy, Ohio for disposal at a permitted facility. Cell 40 has not been used for material disposal since it was taken out-of-service. The 80-mil HDPE liner remains in-place and Cell 40 requires periodic dewatering by MES to remove uncontaminated rainwater which accumulates within the cell. SWMU Nos. 2 and 3 are shown in Photographs 2, 3, and 4 in Appendix A at the time of the 2010 RCRA Site Visit.

No evidence of a spill or release was found during the site visit or in the files reviewed at the MDE or USEPA Region III offices. Site representatives are unaware of any spills or releases from this unit and had no information regarding any spills or releases in their files.

6.3 SWMU No. 4 - Area 4

Area 4 contained two temporary leachate holding lagoons during construction of Area 5. These temporary lagoons were lined basins used for storage of surface water collected during landfill construction. They were removed when landfill construction was completed in 1993.

Area 4 has also been identified as a location where a "paint sludge" material was reportedly observed in a June 27, 1985 Assessment of Continuing Releases Report. This sludge storage area pre-dates landfill closure and there is no documentation indicating the status of the paint sludge. SWMU No. 4 is shown in Photograph 5 in Appendix A at the time of the 2010 RCRA Site Visit.

No evidence of a spill or release was found during the site visit or in the files reviewed at the MDE or USEPA Region III offices. Site representatives are unaware of any spills or releases from this unit and had no information regarding any spills or releases in their files.

6.4 SWMU No. 5 - Area 5

Area 5 was used for the disposal of COPR and demolition debris from AlliedSignal, Inc. (now Honeywell). Area 5 is comprised of 10 waste cells (numbered 1-3, and 5-11, there is no cell 4) containing COPR and chromium contaminated soil, trash, construction debris from demolition of the former AlliedSignal Corporation, Baltimore Works Plant.

MES operated Area 5 while it was active, from approximately 1980 to 1994. In January 1983, MES began accepting COPR from the Baltimore Works facility owned by Allied AlliedSignal. In 1985, the Baltimore Works facility closed. As part of closure, portions of the Baltimore Works facility were dismantled, this yielded chromium contaminated debris consisting of structural beams, concrete, brick, asbestos, soil (up until May 8, 1980) and other chrome contaminated debris which was disposed in Area 5 until 1993. An estimated 451,450 tons of COPR and demolition materials were disposed of in Area 5.

MES completed closure activities for Area 5 on May 20, 1994 and has since managed the closed landfill in post-closure mode. MDE issued a Post-Closure Permit A-264 to MES on October 15, 1995. The permit had an expiration date of 1998; however, the permit remained in effect until a new permit was issued by MDE to MES on January 28, 2002. A condition of the permit is the performance of quadruplicate detection monitoring of seven wells conducted on a quarterly basis for Area 5. There have been no violations of the permit since it was first issued in 1995. Presently, the only waste handling from Area 5 is collecting leachate from the landfill belowground leachate collection system, which is conveyed to a below-ground sump, pumped to and stored in aboveground tanks, prior to being transported off-site for disposal at a permitted facility.

In March 2003, a seep was discovered at the southeastern corner of Area 5. As a result, in December 2005, an in-ground trench drain was installed to intercept the seep flow and it was conveyed to the Area 5 existing leachate collection system. In 2008, a seep was identified near

the interceptor drain, which consisted of moisture being present in a small area at the ground surface Measures have be taken to optimize operation (line cleaning) of the interceptor trench drain.

Since 1999, MES has been permitted to store the landfill leachate in a 21,573 gallon aboveground tank located in SWMU No.11. All of the leachate collected at the Hawkins Point Landfill is combined, including leachate from Areas 2, 3 and 5. The leachate is conveyed via underground conveyance lines to a single wet well located in SWMU No. 11 where it is pumped into the 21,573 gallon aboveground storage tank. The leachate is transported offsite by a licensed hauler (Envirite of Pennsylvania, Inc.) for treatment and disposal at an off-site permitted facility. Prior to the installation of the aboveground storage tank, two 30,000 gallon Underground Storage Tanks (USTs) were used for leachate storage. Those tanks were abandoned (cleaned and filled in-place) as documented in a February 1999 Closure Report that was submitted to the MDE

MES is permitted to store and treat chromium containing leachate in the aboveground storage tank, and installed a treatment system in 1999 that was operated on a pilot basis for a one year period. This system was removed from service because treatment of the leachate did not consistently achieve chromium reduction required to meet effluent discharge limitations. There are no plans to return the treatment system into service. SWMU No. 5 is shown in Photograph 6 in Appendix A at the time of the 2010 RCRA Site Visit.

6.5 SWMU No. 6 - Area 6

Area 6 is located outside of the fenced area of the Hawkins Point facility, but within the property boundaries. It was previously leased to the Cosmin Corporation, and this area is not currently being used.

Area 6 was used for short-term storage of containerized ferrous sulfate by MES before being transported to other facilities.

Additionally, a small-scale, limited duration pilot test for solid waste treatment was performed in Area 6 circa 1996. The pilot testing was performed within a contained area which was removed following the completion of the pilot testing activities. SWMU No. 6 is shown in Photograph 7 in Appendix A at the time of the 2010 RCRA Site Visit.

6.6 SWMU No. 7 - Septic System

The facility's septic system receives sanitary wastewater from drains and toilets. The system consists of two 5,000 gallon holding tanks, with a total capacity of 10,000 gallons. The holding tanks are installed belowground and receive sanitary wastewater via conveyance line from the on-site trailer.

According to site representatives, a past leak allowed surface water to enter one of the septic tanks. However, it is reported that no wastewater overflowed the tank and the septic tank was repaired. No documentation regarding this septic tank repair was prepared as a release did not

occur. SWMU No. 7 is shown in Photograph 8 in Appendix A at the time of the 2010 RCRA Site Visit.

6.7 SWMU No. 8 - Dumpsters and Recycling Bins

The facility maintains a dumpster near the site entrance, as well as several garbage and recycling bins within the maintenance and office buildings. General office waste is deposited in the bins and solid waste dumpster, respectively. The dumpsters are emptied on a regular basis by a third party for off-site disposal at a permitted sanitary landfill. SWMU No. 8 is shown in Photograph 9 in Appendix A at the time of the 2010 RCRA Site Visit.

No evidence of a spill or release was found during the site visit or in the files reviewed at the MDE or USEPA Region III offices. Site representatives are unaware of any spills or releases from this unit and had no information regarding any spills or releases in their files.

6.8 SWMU No. 9 - Plant Building/Warehouse

The onsite Plant Building/Warehouse was used previously to perform periodic maintenance on tractors, lawnmowers, backhoes, chainsaws, and various other pieces of equipment used to maintain the landfill site. In the past, a waste oil drum was kept on a containment pad for storage of waste oil drained during equipment maintenance. This maintenance is no longer performed on site, and a waste oil drum is no longer maintained at the site. The warehouse is currently only used for storage. SWMU No. 9 is shown in Photographs 10 and 11 in Appendix A at the time of the 2010 RCRA Site Visit.

A release occurred in this area, which is detailed in Area of Concern (AOC) No. 1.

6.9 SWMU No. 10 - Former Lab Trailer

The on-site trailer was used previously as a laboratory where samples were analyzed before COPR was accepted for disposal in the landfill cells when they were in operation. Once the facility stopped accepting COPR, the laboratory trailer was removed from the site. SWMU No. 10 is shown in Photograph 12 in Appendix A at the time of the 2010 RCRA Site Visit.

No evidence of a spill or release was found during the site visit or in the files reviewed at the MDE or USEPA Region III offices. Site representatives are unaware of any spills or releases from this unit and had no information regarding any spills or releases in their files.

6.10 SWMU No. 11 - Leachate Collection System and Management Area

There are two separate collection systems that collect landfill leachate from the landfill cells. The first of these leachate collection systems serves Areas 2, and 3, while the second serves Area 5. The systems collect the leachate via below ground perforated leachate collection lines. The two separate leachate collection systems convey leachate via below ground lines to a single wet well, where the combined leachate flow is pumped to an aboveground storage tank with a capacity of 21,573 gallons.

This leachate collection system was rehabilitated in 2002, and requires routine maintenance consisting of cleaning of the leachate lines. SWMU No. 11 is shown in Photograph 10 in Appendix A at the time of the 2010 RCRA Site Visit.

A release occurred in this area, which is detailed in Area of Concern (AOC) No. 1.

6.11 AOC No. 1 - 2002 Caustic Soda Release

In 2002, during the rehabilitation of the Leachate Collection System (SWMU No. 9), approximately 200 gallons of caustic soda was released within the on-site maintenance building. This spill occurred while approximately 1,500 gallons were being pumped into a tanker truck for offsite transport. AOC No. 1 is shown in Photograph 11 in Appendix A at the time of the 2010 RCRA Site Visit.

This spill resulted in a Notice of Violation, and was remediated under MDE supervision.

6.12 AOC No. 2 - 2003 Valve Box Overflow

In 2003, the valve box for the Leachate Collection System (SWMU No. 11), overfilled with water. The problem was resolved by removing the water and the valve box was modified to prevent subsequent overflows. AOC No. 2 is shown in Photograph 10 in Appendix A at the time of the 2010 RCRA Site Visit.

7.0 DESCRIPTION OF EXPOSURE PATHWAYS FOR ALL RELEASES OR POTENTIAL RELEASES

7.1 Air

The surrounding land is primarily zoned for heavy industrial use. Some limited undeveloped parkland exists nearby. There are no residences or recreational areas within 1,000 feet of the facility boundary. There are no known reported air releases or air concerns at the property.

There are no exposure pathways for air releases or potential releases that pertain to air media because the site is a capped landfill that does not accept any waste or other such material.

7.2 Surface Water

Surface water in the Hawkins Point area generally flows easterly, and discharge into Thomas Cove, on the western bank of the Patapsco River. Thomas Cove borders the property on the east. Surface water flows are controlled primarily by channelization, ditches, and drainage piping as a result of development of the area.

7.3 Groundwater

Perched water table(s) have been encountered on the site. Unconfined and confined groundwater conditions were found elsewhere at the site in the post-Cretaceous and Cretaceous sediments. Shallow groundwater flows from the southwest along the B&O Railroad tracks to the northeast along Thomas Cove and the Patapsco River. Groundwater elevations range from approximately several feet above ground surface to 36 feet below ground surface. Local ground water contours tend to converge near Thomas Creek. The interpreted local flow is it toward the northeast-southeast trending trough of post-Cretaceous sediments.

7.4 Soil

The entire site is a capped landfill. No waste is handled or managed above ground.

8.0 EXPOSURE PATHWAY CONTROLS AND RELEASE CONTROLS INSTITUTED AT THE FACILITY

8.1 Site Access

The site is surrounded by a 6-foot high barbed wire chain-link security fence. A total of 5 access gates are in place with one serving as the main entrance.

8.2 Air

No exposure pathway controls or release controls for air media exist.

8.3 Surface Water

When the NPDES permit was discontinued, a general discharge permit was issued. The site operates under a general permit for three stormwater discharge points. No documentation was found indicating exceedances of permit requirements.

8.4 Groundwater

Ten monitoring wells are sampled twice a year in the southern part of the facility. These wells are used to monitor the potential presence of constituents specified in the CHS permit in groundwater in Areas 2, and 3 (SWMU Nos. 2 and 3). These wells were rehabilitated approximately three years ago. According to facility representatives and review of the quarterly sampling reports, there have been no groundwater monitoring violations of the CHS permit. The only analytes detected have been due to naturally occurring contaminants.

Seven monitoring wells are sampled quarterly (in quadruplicate) in Area 5. In 2008, statistical analysis yielded a result of a Statistically Significant Increase (SSI) in well 2d. Subsequent review of the result concluded that this SSI was an anomaly.

8.5 Soil

The entire site is a capped landfill. No waste is handled or managed above ground.

9.0 FOLLOW-UP ACTION ITEMS

The USEPA Region III and the MDE will decide if additional information or sampling at the facility is required to determine whether the environmental indicators have been met or if corrective action is required at the facility.

APPENDIX A SITE VISIT PHOTOGRAPHS



Photograph 1: SWMU No. 2 – Area 2



Photograph 2: SWMU No. 2 – Area 2



Photograph 3: SWMU No. 3 – Area 3/Cell 40



Photograph 4: SWMU No. 1 (not pictured, left of Photograph) – Area 1 SWMU No. 2 (center) – Area 2 SWMU No. 3 (right) – Area 3



Photograph 5: SWMU No. 4 – Area 4



Photograph 6: SWMU No. 5 – Area 5



Photograph 7: SWMU No. 6 – Area 6



Photograph 8: SWMU No. 7 – Septic Tanks

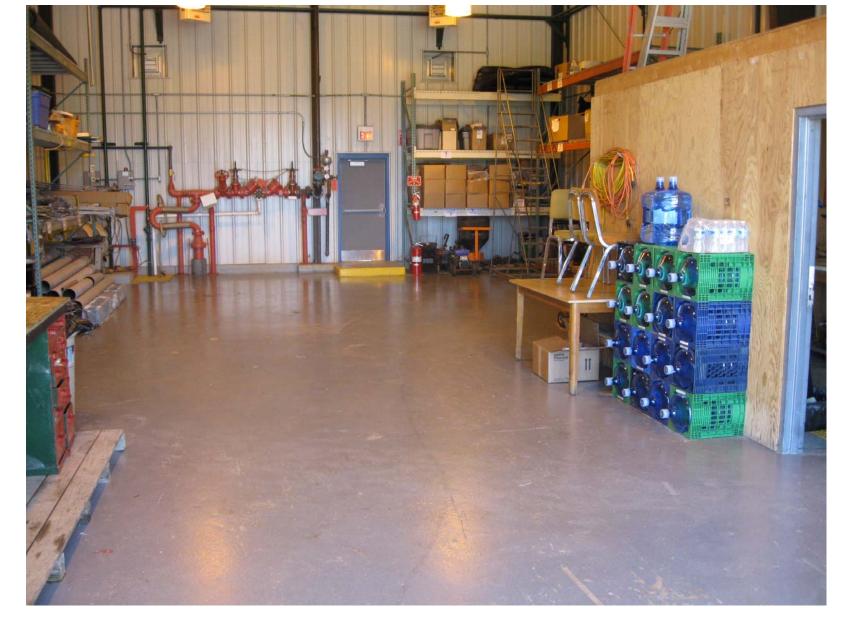


Photograph 9: SWMU No. 8 – Dumpster



Photograph 10: SWMU No. 11 (foreground) – Leachate Management Area & Collection AOC No. 2 (foreground) – Valve Box Overflow

SWMU No. 9 (left) – Plant Building/Warehouse

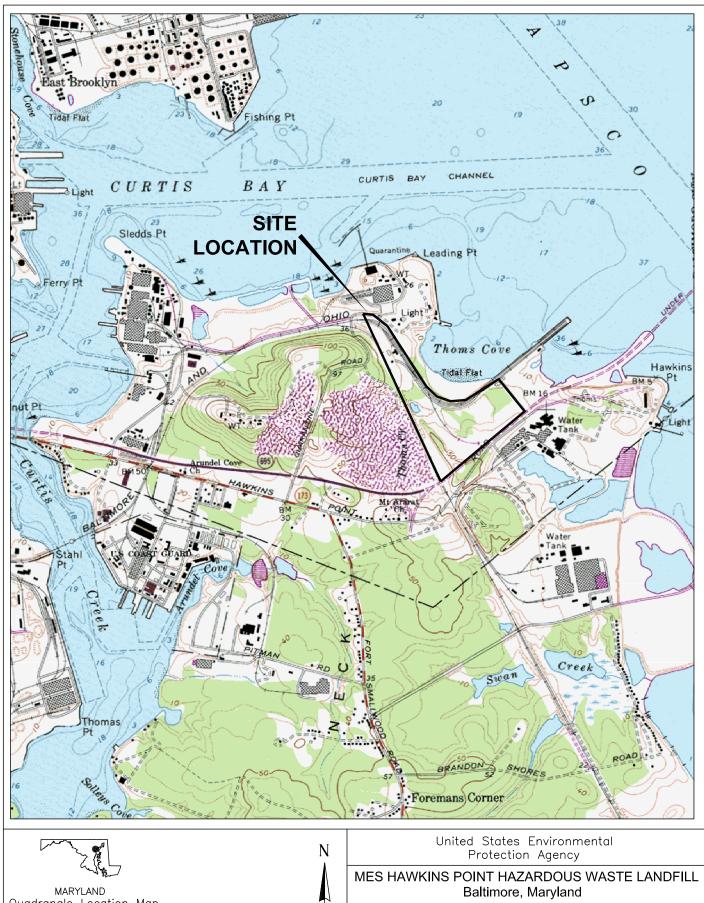


Photograph 11: SWMU No. 9 – Plant Building/Warehouse inside $AOC\ No.\ 1-2002\ Caustic\ Soda\ Release$



Photograph 12: SWMU No. 10 – Location of Former Lab Trailer

APPENDIX B SITE LOCATION AND LAYOUT MAPS



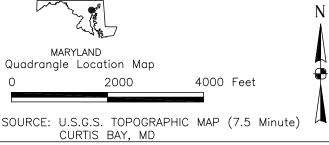


FIGURE 1 SITE LOCATION MAP



TETRA TECH EC, INC.

